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CLAIMS

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What is claimed is:

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1. An implant for stabilizing skeletal bone across a discontinuity comprising a plate

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having a first end and a second end with an intermediate length to span a discontinuity and a

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width to accommodate at least one screw hole in each of said first end and said second end,

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the width of said intermediate length being less than said width of said first end and said

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second end, said plate including a thickness with a proximal surface for contacting a bone and

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an opposite distal surface, said plurality of screw holes extending through said thickness for

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accepting bone screws, said plurality of screw holes each having an enlarged depression in said

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distal surface, each said depression having a continuous sidewall connected to a bottom wall

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between said proximal and said distal surfaces, each said screw hole and each said depression

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having a longitudinal axis, a plurality of bone screws with external threads adapted to

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penetrate said plurality of screw holes, said bone screws each having an enlarged heads

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adapted to engage said bottom of each said depressions whereby said bone screws are inserted

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through said plate and adapted to threadably engage said bone to stabilize the bone across the

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discontinuity whereby said discontinuity may be observed through said intermediate length

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during implantation.

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1 2. An implant of claim 1 wherein said longitudinal axis of each said screw hole and
2 each depression on said one end diverges from said longitudinal axis of each said screw hole
3 and each said depression on said second end.
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5 3. An implant of claim 2 wherein each said plurality of bone screws has one internal
6 diameter, said plurality of bone screws each have a fluted proximal end.
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8 4. An implant of claim 3 wherein said longitudinal axis of each said screw hole and
9 each depression on said one end diverges from said longitudinal axis of each said screw hole
10 and each said depression on said second end.
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12 5. An implant of claim 1 wherein said first end and said second end each have a slot
13 between said proximal and said distal surfaces, each of said slots extending through said
14 sidewall of each of said depressions, a screw lock slidably disposed in each of said slots
15 whereby said screw lock may be slid into said depressions to prevent back out.
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18 6. An implant of claim 5 wherein said slot in said first end and said second end
19 extends through said first end and said second end, said screw lock including an extension
20 slidably passing through said first end and said second end whereby said screw lock may be
21 removed.
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1 7. An implant of claim 2 wherein said first end and said second end each have a slot
2 between said proximal and said distal surfaces, each of said slots extending through said
3 sidewall of each of said depressions, a screw lock slidably disposed in each of said slots
4 whereby said screw lock may be slid into said depressions to prevent back out.

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6 8. An implant of claim 3 wherein said first end and said second end each have a slot
7 between said proximal and said distal surfaces, each of said slots extending through said
8 sidewall of each of said depressions, a screw lock slidably disposed in each of said slots
9 whereby said screw lock may be slid into said depressions to prevent back out.

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11 9. An implant of claim 4 wherein said first end and said second end each have a slot
12 between said proximal and said distal surfaces, each of said slots extending through said
13 sidewall of each of said depressions, a screw lock slidably disposed in each of said slots
14 whereby said screw lock may be slid into said depressions to prevent back out.

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16 10. An implant of claim 9 wherein said first end and said second end each have at least
17 two screw holes.

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19 11. An implant of claim 5 wherein said first end and said second end each have at least
20 two screw holes.

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1 12. A spinal stabilization system for an anterior cervical fixation of two adjacent
2 vertebrae comprising a rigid plate having a first end, a second end and an intermediate length
3 to span the intervertebral space, said first end and said second end each having a width, said
4 intermediate length having a lesser width, said intermediate length asymmetrically connected
5 to said first end and said second end, said rigid plate having a proximal surface for contact
6 with vertebrae and an opposite distal surface, a plurality of screw holes in said first end and
7 a plurality of screw holes in said second end, each of said plurality of screw holes countersunk
8 with a depression, said depression having a continuous side wall connected to a bottom
9 between said proximal surface and said distal surface, a plurality of bone screws engaging said
10 screw holes, said bone screws having an enlarged head engaging said bottom, said first end
11 and said second end each have a slot between said proximal and said distal surfaces, each of
12 said slots extending through said sidewall of each of said depressions, a screw lock slidably
13 disposed in each of said slots whereby said screw lock may be slid into said depressions to
14 contact said bone screw heads whereby said locking screws are prevented from backing-out
15 of said plate.

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17 13. A spinal stabilization system of claim 12 wherein said plurality of screw holes and
18 each said depressions have a longitudinal axis through said plate, said longitudinal axis of said
19 plurality of screw holes on said first end diverging from said longitudinal axis of said plurality
20 of screw holes on said second end.

1 14. A spinal stabilization system of claim 12 wherein a plurality of bone screws each
2 have a leading end and a distal end, said leading end having flutes.

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4 15. A spinal stabilization system of claim 12 wherein said plurality of bone screws
5 each have a leading end and a distal end, said leading end being reduced in diameter, said
6 exterior threads adapted to engage a vertebra.

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8 16. A spinal stabilization system of claim 12 wherein said slot in said first end and
9 said second end extends through said first end and said second end, said screw lock including
10 an extension slidably passing through said first end and said second end whereby said screw
11 lock may be removed.

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13 17. A spinal stabilization system of claim 12 wherein said plate is curved to reduce
14 the silhouette.

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